Republic of Yemen

الجمهورية اليمنية
الجامعة الإماراتية الدولية
كلية الطب والعلوم الصحية
الفصل الاول ٢٠١٩-٢٠٢٠

MICROBIOLOGY
د/ الغوري
اللميسي

اسم الطالب:

MEDICAL MICROBIOLOGY

Midte . Examination (3rd level /Medicine) **Allowed time: 2 hrs**

e correct answer for each the following questions (60 marks):

1) **Antimicrobial resistance has become a significant problem. Which one of the following is of major concern worldwide:**
   - **a)** Penicillin resistance in *Streptococcus pneumoniae*.
   - **b)** Nafcillin resistance in *Staphylococcus aureus*
   - **a)** Penicillin resistance in *Neisseria gonorrhoeae*
   - **b)** Vancomycin resistance in *Staphylococcus aureus*.

2) **The least method for acquire bacterial antibiotic gene resistance:**
   - **a)** Transformation.
   - **b)** Conjugation.
   - **c)** Transposons.
   - **d)** Transduction.

3) **The Causative bacterial agent of Scarlet fever and acute glomerulonephritis is:**
   - **a)** *Staphylococcus aureus.*
   - **b)** *Streptococcus group-A.*
   - **c)** *Streptococcus group-B.*
   - **d)** *Streptococcus group-C.*

4) **Bacterial Food poisoning can be caused by:**
   - **a)** *Staphylococcus aureus, Bacillus cereus.*
   - **b)** *Clostridium perfringens.*
   - **c)** *Clostridium botulinum.*
   - **d)** All of the above.

5) **Responsible for causing more than 80% of all community-acquired UTIs:**
   - **a)** *Escherichia coli.*
   - **b)** *Proteus vulgaris.*
   - **c)** *Staph. saprophyticus.*
   - **d)** *Yersinia pestis.*

6) **The most common cause of typhoid fever is the following bacteria:**
   - **a)** *B. melitensis.*
   - **b)** *Salmonella. typhi.*
   - **c)** *Shigella sonnei.*
   - **d)** *Strept.viridans.*

7) **Associated with gastritis, duodenal (peptic) ulcer disease, gastric ulcers, and gastric carcinoma:**
   - **a)** *Salmonella typhi.*
   - **b)** *Helicobacter pylori.*
   - **c)** *Brucella abortus.*
   - **d)** *Shigella sonnei.*

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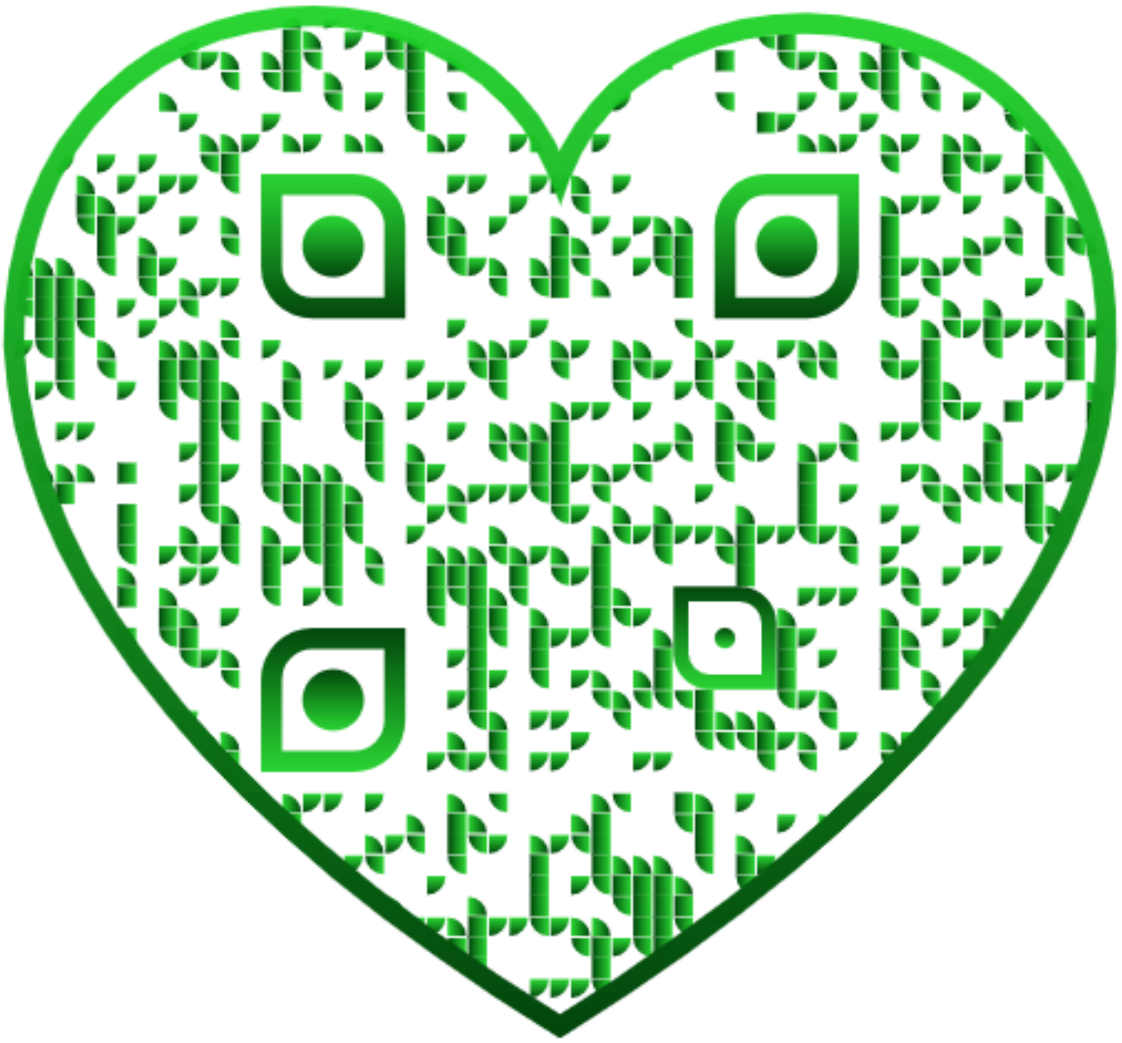

Microbiology
د/ الغوري
اللميسي

8) **The most common cause bacillary dysentery in developed countries is:**
   - **a)** *S. dysenteriae* (Group A)
   - **b)** *S. flexneri* (Group B)
   - **c)** *S. boydii* (Group C)
   - **d)** *S. sonnei* (Group D)

9) **The following bacterial infection is similar to cholera infection:**
   - **a)** *Enterotoxigenic (ETEC).*
   - **b)** *Enteropathogenic (EPEC).*
   - **c)** *Enteroinvasive (EIEC).*
   - **d)** *Enterohemorrhagic (EHEC serotype 0157:H7).*

10) **More severe Brucellosis in Yemen can be caused by the following bacteria:**
   - **a)** *B. suis & B. canis.*
   - **b)** *B. melitensis.*
   - **c)** *Salmonella typhi & paratphi.*
   - **d)** *B. abortus.*

11) **Cell wall of both Gram-positive and Gram-negative bacteria are composed of complex macromolecules. Which of the following statement describes both types of cell walls:**
   - **a)** They contain significant amounts of teichoic acid.
   - **b)** They contain murein in their cell wall.
   - **c)** The polysaccharide O- antigen determines their antigenic specificity.
   - **d)** They contain murein in their cell membrane.

12) **The majority of human clinical anthrax is:**
   - **a)** Cutaneous anthrax.
   - **b)** Gastrointestinal anthrax.
   - **c)** Pulmonary anthrax.
   - **d)** All of the above.

13) **Pulmonary T.B. in Yemen is more prevalent in:**
   - **a)** Sana'a governorate.
   - **b)** Aden governorate.
   - **c)** Taiz governorate.
   - **d)** Hodeida governorate.

14) **Factors that assist microbial pathogens to established infection are:**
   - **a)** Capsule secretion and possession Pilli.
   - **b)** Production of endotoxin or exotoxin.
   - **c)** Production of extra-cellular enzymes.
   - **d)** All the above.

15) **A carrier of human *Salmonella. typhi* had:**
   - **a)** Anti-O Ab. Positive test
   - **b)** Anti-H Ab. Positive test.
   - **c)** Anti-Vi Ab or Anti-K Ab. Positive test.
   - **d)** All of the above.

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MICROBIOLOGY
د/ الفوري
اللميسي

اسم الطالب:

16) The action of one anti-microbia… the activity of another is called:

a) Antagonism. **b)** Synergism. **c)** Resistance. **d)** Mutualism.

17) Antisepsis & Antiseptic agents are:

a) Chemical agents used on skin or non-living tissues.
b) Chemical agents used on non- living tissues.
c) Chemical agents used as a topic and systemic disinfectant.
d) None of the above.

18) Chest radiograph of a patient showing a widened mediastinum that is characteristic of:

a) Pulmonary anthrax.
b) T.B. infection.
c) Labor pneumonia.
d) Botulism.

19) Lockjaw / Stiffness of jaw is caused by:

a) *Clostridium tetani.*
b) *Clostridium botulinum.*
c) *B.anthracis.*
d) *Clostridium perfringens.*

20) Selective Toxicity of anti-microbial drugs is:

a) Cause greater harm to microorganisms and to host.
b) Activity of one drug interferes with the action of another.
c) The range of microorganisms they kill or inhibit.
d) None the above.

21) Features of diphtheria toxicosis:

a) Edema of the neck hypodermic tissues.
b) Cyanosis of lips and paleness of skin.
c) Tachycardia and decreasing of a body temperature.
d) All of the above.

22) Miliary tuberculosis is more prevalent among :

a) Children below 2 years.
b) Children 2 – Io years.
c) Children above Io years.
d) Adult's male and female.

23) lumpy jaw is caused by :

a) *Actinomyces.*
b) *Nocardia.*
c) *Clostridium tetani.*
d) *Staphylococcus.*

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Microbiology
د/ اللميسي
اللميسي

اسم الطالب:

24) Antistreptolysin-O (ASOT) :

a) Suggests recent upper respiratory tract bacterial infection.
b) Induced by Skin bacterial infection.
c) Recent bacterial upper respiratory tract infection by S.pyogens.
d) Antistreptolysin-S antibody titer was positive.

25) *E.coli* virulence factor that assist urinary colonization and infection (UTI) is :

a) Pilli and pillin proteins.
b) Lipopolysaccharides LPS.
c) Toxins and capsule.
d) All of the above.

26) Low-level disinfectants are used for:

a) Non-critical instruments and devices.
b) Endoscopes, Surgical instruments.
c) Animate objectives.
d) All of the above.

27) A 10-year-old child has a primary pulmonary Mycobacterium tuberculosis infection. Which of the following features of tuberculosis is most correct?

a) In primary tuberculosis, an active exudative lesion develops and rapidly spreads to lymphatic and regional lymph nodes.
b) The exudative lesion of primary tuberculosis often heals slowly.
c) If tuberculosis develops years later, it is a result of another exposure to Mycobacterium tuberculosis.
d) In primary tuberculosis, all of the infecting Mycobacterium tuberculosis organisms are killed by the patient's immune response.

28) Bactericidal antibiotic is:

a) Kill bacteria and reversibly inhibit growth of microorganisms.
b) Suitable when host defenses are potentially effective.
c) Suitable when host defenses are adequate.
d) None of the above.

29) Urease test is used for diagnosis:

a) Scarlet fever.
b) *Salmonella typhi* infection.
c) Undulant fever.
d) *H pylori* infection.

30) Human Normal Flora or microbiota are regularly found at any anatomical site of human body EXCEPT:

a) Human Oral Cavity and Respiratory system.
b) Large and small intestine.
c) Cerebrospinal fluid, blood and brain.
d) Genitourinary tract.

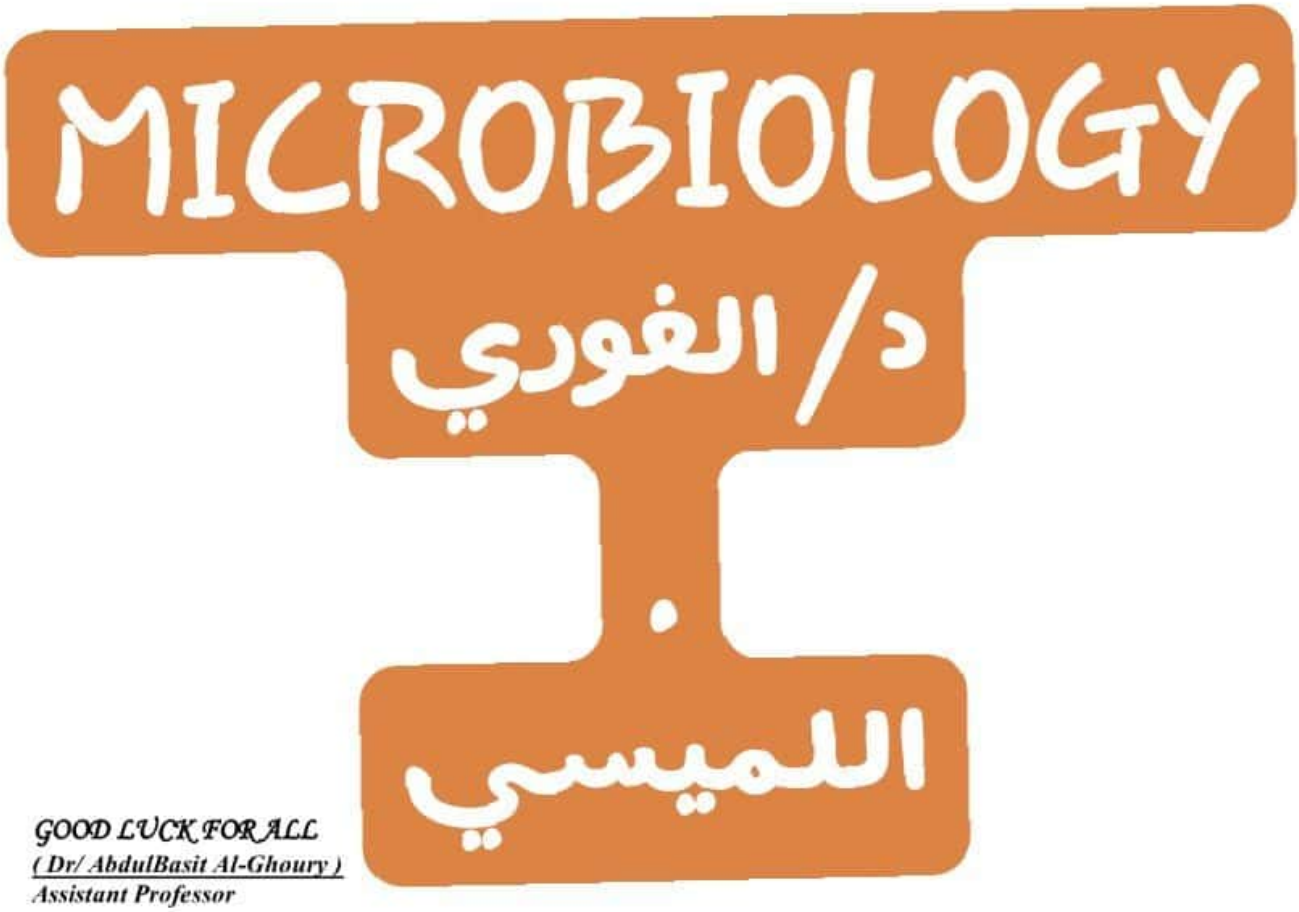
الممسوحة ضوئيا بـ CamScanner

اسم الطالب:

Q2) Answer the following question (20 marks):

A 54-year-old male patient attended Medicine OPD, with a history of fever, headache, low back pain, joint pain for 1 month. History revealed that he was a shepherd by profession and was in habit of consuming unboiled milk. The patient was admitted and investigated thoroughly. WBC count was raised. ESR (erythrocyte sedimentation rate) was raised; Widal test was negative and Rose Bengal test positive. The serum was negative for HIV antibodies by ELISA. Peripheral blood smear for malaria parasite was negative.

1) **What is the correct diagnose for this condition.**
2) **What are the pathogenic bacterial causing this infection?**
3) **What are the modes of infection to humans?**
4) **What are the risk factors for this infection?**



GOOD LUCK FOR ALL
(Dr/ AbdulBasit Al-Ghoury)
Assistant Professor

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Good luck

Republic of Yemen
Emirates International University
College of Medicine & Health Sciences

Q3) Choice and write briefly essay on only ONE of following (25 marks):

1) Resistant Mechanisms to antimicrobial drugs.
2) Human probiotic infusion (HPI).

الممسوحة ضوئيا بـ CamScanner

Q5) Choice and write briefly essay on only ONE (1) of the following (15 marks):

1) **Clinical tuberculosis.**
2) **Topic of your presented seminar.**

GOOD LUCK FOR ALL
(Dr/ Abdul Rasit Al-Ghoury)
Assistant Professor

الممسوحة ضوئيا بـ CamScanner

Q2) Match the following Disease or syndrome with their respective characteristic: [25Marks]

Disease or syndrome	*Characteristic*
1- Plasmid.	a) Transposons.
2- Post-antibiotic Effect.	b) Population doubling time.
3- Microbial biofilm.	c) An increase in all the cell components.
4- *Bacterial Growth.*	d) Can protect the bacteria from host defenses and antibiotics.
5- Jumping genes.	e) Delayed bacterial regrowth after exposure to antimicrobial agents.
	f) *Extra-chromosomal DNA.*

الممسوحة ضوئيا بـ CamScanner

Micro
د/ الفوري
اللميسي

اسم الطالب:

General Microbiology-1

Midterm Examination (2nd level /Pharmacy) **Allowed time: 1hr**

ce the correct answer for each the following questions
[50 MARKS]:

1) **Cell wall of both Gram-positive and Gram-negative bacteria are composed of complex macromolecules. Which of the following statement describes both types of cell walls:**
   - **a)** They contain significant amounts of teichoic acid.
   - **b)** They contain murein in their cell wall.
   - **c)** The polysaccharide O- antigen determines their antigenic specificity.
   - **d)** They contain murein in their cell membrane.

2) **The least method for acquire bacterial antibiotic gene resistance:**
   - **a)** Transformation.
   - **b)** Conjugation.
   - **c)** Transposons.
   - **d)** Transduction.

3) **The difference between Gram-negative and Gram-positive bacteria is:**
   - **a)** They have peptidoglycan layer.
   - **b)** They have Plasma membrane.
   - **c)** Non Peri-plasmic space between inner and outer membrane.
   - **d)** None of the above.

4) **Human Normal Flora or microbiota are regularly found at any anatomical site of human body EXCEPT:**
   - **a)** Human Oral Cavity and Respiratory system.
   - **b)** Large and small intestine.
   - **c)** Cerebrospinal fluid, blood and brain.
   - **d)** Genitourinary tract.

5) **Advantages of the human normal flora are:**
   - **a)** Contribute to immunity.
   - **b)** Exert microbial antagonism against nonindigenous species.
   - **c)** Inducing low levels of circulating and secretory antibodies.
   - **d)** All of the above.

6) **Antimicrobial resistance has become a significant problem. Which one of the following is of major concern worldwide:**
   - **a)** Penicillin resistance in *Streptococcus pneumoniae*.
   - **b)** Methicillin resistance in *Staphylococcus aureus*

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اسم الطالب:

c) Penicillin resistance in *Neisseria gonorrhoeae*
d) Vancomycin resistance in *Staphylococcus aureus*.

7) The most common method of bacterial Quantification is:

a) Direct Cell Count.
b) Plate Count.
c) Dry Weight.
d) Membrane Filter.

8) Which of the following components is present in gram-negative bacteria but not in gram positive bacteria:

a) Peptidoglycan
b) Lipid A
c) Capsule
d) Flagella

9) The bacteria which are able to grow at 20°C to 40°C, are known as:

a) Psychrophiles.
b) Facultative psychrophiles.
c) Thermophiles.
d) Mesophiles.

10) Endospores formation is more common in:

a) Gram positive rods bacteria.
b) Gram positive cocci bacteria.
c) Gram negative cocci bacteria.
d) Gram negative rods bacteria.

11) Certain microorganisms are never considered to be members of the normal flora. They are always considered to be pathogens. Which one of the following organisms fits into that category?

a) *Streptococcus pneumoniae*
b) *Escherichia coli*
c) *Mycobacterium tuberculosis*.
d) *Staphylococcus aureus*

12) The most common type of bacterial genetic mutation is:

a) Point mutation.
b) Silent mutation.
c) Frame shift mutations.
d) All of the above.

الممسوحة ضوئيا بـ CamScanner

MiCRO
د/ الغوري
اللميسي

13) **The following toxin inhibits the release of acetylcholine at the synapse, resulting in lack of muscle contraction and paralysis:**

a) Botulinum toxin.
Tetanospasmin.
Erythrogenic toxin.
d) Diphtherotoxin`.

14) **The following bacteria causes pulmonary disease similar to T.B:**

a) *Actinomyces israelii.*
b) *Nocardia brasiliensis.*
c) *Streptococcus pyogenes.*
d) *Corynbacterium diptheriae.*

15) **Human Intestinal tuberculosis is caused by:**

a) *Mycobacterium bovis.* b) *Mycobacterium tuberculosis.*
c) *Mycobacterium leprae.* d) All of the above.

16) **Miliary tuberculosis is more prevalent among :**

a) Children below 2 years.
b) Children 2 – Io years.
c) Children above Io years.
d) Adult's male and female.

17) **The following bacteria had Catalase & Coagulase test positive:**

a) *C. tetani* & *B.anthracis.*
b) *Streptococcus pyogenes.*
c) *Staph. aureus.*
d) *Staph. aureus* & *B.anthracis.*

18) **frequently involved in nosocomial and opportunistic infections:**

a) Coagulase-negative staphylococcus.
b) Coagulase-positive staphylococcus.
c) Atypical Mycobacteria.
d) All of the above.

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اسم الطالب:

13) **According to cell wall structure, The most common pathogenic bacteria have:**

a) Rigid cell wall. **b)** Flexible cell wall. **c)** No, cell wall.

14) **DNA transfer from one bacterium to another through phages is termed as:**

a) Transduction **b)** Induction

C) Transfection **d)** Infection

15) **The organisms which can grow both in presence and absence of oxygen**

a) Aerobes **b)** Anaerobes

c) Facultative anaerobes **d)** Strict aerobes

Q2) Match the following item from column (A) with their respective characteristic statement from Column (B): {10 marks}

Disease or syndrome	*Characteristic*
1- **Plasmid.**	a) ***Extra-chromosomal DNA.***
2- **Capnophilic bacteria.**	b) **Jumping genes.**
3- **Microbial biofilm.**	c) **Growth Factors.**
4- **Transposons.**	d) **Population doubling time**
5- **Generation time**	e) **Bacterial Growth**
	f) **Pathogenic bacteria required high CO2 levels.**

جامعة الحضارة
كلية الطب والعلوم الطبية
شعبة الصيدلة
الفصل الدراسي الاول 2019/20 20

اسم الطالب:

Q3) Choice and write briefly essay on only ONE (1) of the following {20 marks}:

1) **Human probiotic infusion (HPI).**
2) **Types of DNA replication methods.**

الممسوحة ضوئيا بـ CamScanner

19) **The most suitable culture media used for isolation and diagnosis of *Corynbacterium diptheriae*:**

a) Loeffler's Serum Agar
b) Lowenstein Jensen Medium
c) Chopped meat-glucose medium
b) Thioglycolate medium

20) **Lockjaw / Stiffness of jaw is caused by:**

a) *Clostridium tetani.*
b) *Clostridium botulinum.*
c) *Bacillus anthracis.*
d) *Clostridium perfringens.*

Civilization University
Faculty of Medicine & Health Sciences
Dept: Med. Lab.
1st Semester 2019/2020

جامعة الحضارة
كلية الطب و العلوم الطبية
قسم المختبرات الطبية
الفصل الدراسي الاول 2019/2020

اسم الطالب :

Q2: Answer the following Question: (20 MARKS)

A 64-year-old-man was admitted to the hospital with a 5-month history of progressive weakness and a weight loss of 13 kg. He also had fever, chills, and a chronic cough productive of yellowish sputum, occasionally streaked with blood. The patient drank a lot of alcohol and had smoked one pack of cigarettes a day for the past 45 years. The patient had no history of tuberculosis, no record of prior skin tests for tuberculosis or abnormal chest radiographs, and no known exposure to tuberculosis. A chest radiograph showed extensive cavitary infiltrates in both upper lobes. A Mantoux skin test was negative and an acid-fast stain was positive.

1) **What is the correct diagnosis for this illness case?**

2) **What is the name of vaccine that used for prevention of this infection?**

3) **What is the name of culture media and stain used for diagnosis?**

4) **Give your interpretation about "Mantoux skin test" results?**

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MICRO
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اسم الطالب

Q2) Put True and False beside each statement & re-correct each False statements (I0 marks):

1) Botulinum toxin a neurotoxin causing uncontrollable muscle spasms (lockjaw) and convulsions. ( ).

2) Bacterial endotoxin is produced by Gram Positive bacteria during lysis or multiplication of bacteria and considered a weakly antigenic ( ).

3) During bacterial growth curve, bacteria are more sensitive to antibiotics in stationary phase ( ).

4) Gram positive bacteria are the second Colonizers in formation of dental plaque and caries ( ).

5) Cadherin is a glycoprotein allowing microbes to enter host cells. ( ).

Civilization University
Faculty of Medicine & Health Sciences
Section: Dental Medicine
1st Semester 2019/2020

جامعة الحضارة
كلية الطب و العلوم الطبية
شعبة طب الاسنان
الفصل الدراسي الاول 2019/2020

اسم الطالب :

Q3) Choice and write briefly essay on only ONE (1) of the following: (I0 marks):

1) **Role of Normal mouth Microbiota in dental plaque and caries.**
2) **Bacterial Cells can damage Host Cells by three mechanisms.**
   a) Enumemte these three mechanisms?
   b) In your think, which is the most bacterial damage mechanism? Why?

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Civilization University
Faculty of Medicine & Health Sciences
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جامعة الحضارة
كلية الطب و العلوم الطبية
قسم المختبرات الطبية
الفصل الدراسي الا ول 2019/2020

اسم الطالب :

Systematic Bacteriology-1

Mid-term Examination/3rd BSc. Lab. level. **Allowed time: 2 hrs**

Q-1) Choice the correct answer for each the following questions (40 marks):

1) Lumpy jaw is caused by the following bacteria :

a) *Actinomyces.* **b)** *Nocardia.* **C)** *S.pyogens.* **d)** *Staphylococcus.*

2) Antimicrobial resistance has become a significant problem. Which one of the following is of major concern worldwide:

a) Penicillin resistance in *Streptococcus pneumoniae.*
b) Nafcillin resistance in *Staphylococcus aureus*
c) Penicillin resistance in *Neisseria gonorrhoeae*
d) Vancomycin resistance in *Staphylococcus aureus.*

3) Bacterial Food poisoning can be caused by:

a) *Staphylococcus aureus, Bacillus cereus.*
b) *Clostridium perfringens.*
c) *Clostridium botulinum.*
d) All of the above.

4) The majority of human clinical anthrax is:

a) Cutaneous anthrax.
b) Gastrointestinal anthrax.
c) Pulmonary anthrax.
d) All of the above.

5) Pulmonary T.B. in Yemen is more prevalent in:

a) Sana'a governorate. **b)** Aden governorate.
C) Taiz governorate. **d)** Hodiedah governorate.

6) Chest radiograph of a patient showing a widened mediastinum that is characteristic of:

a) Pulmonary anthrax.
b) T.B. infection.
c) Labor pneumonia.
d) Botulism.

الممسوحة ضوئيا بـ CamScanner

7) **A 10-year-old child has a primary pulmonary Mycobacterium tuberculosis infection. Which of the following features of tuberculosis is most correct?**
   - **a)** In primary tuberculosis, an active exudative lesion develops and rapidly spreads to lymphatic and regional lymph nodes.
   - **b)** The exudative lesion of primary tuberculosis often heals slowly.
   - **c)** If tuberculosis develops years later, it is a result of another exposure to Mycobacterium tuberculosis.
   - **d)** In primary tuberculosis, all of the infecting Mycobacterium tuberculosis organisms are killed by the patient's immune response.

8) **Features of diphtheria toxicosis:**
   - **a)** Edema of the neck hypodermic tissues.
   - **b)** Cyanosis of lips and paleness of skin.
   - **c)** Tachycardia and decreasing of a body temperature.
   - **d)** All of the above.

9) **Gram-positive irregular bacilli andpossess irregular swellings at one end that give them the "club-shaped":**
   - **a)** *Streptococcus pyogenes*
   - **b)** *Clostridium tetani.*
   - **c)** *Corynbacterium diptheriae.*
   - **d)** *S. pneumonia.*

10) **The main causative bacterial micro-organism of gas gangrene is:**
   - **a)** *Bacillus anthrax.*
   - **b)** *Clostridium tetani.*
   - **c)** *Cl.perfringens.*
   - **d)** *Staph.aurus.*

11) **MRSA has a significant problem. Which one of the following is the alternative antibiotic can be used:**
   - **a)** Penicillin resistance in *Streptococcus pneumoniae.*
   - **b)** Methicillin resistance in *Staphylococcus aureus*
   - **c)** Penicillin resistance in *Neisseria gonorrhoeae*
   - **d)** Vancomycin resistance in *Staphylococcus aureus.*

12) **The following bacteria had Catalase positive:**
   - **a)** *Staph. aureus & B.anthracis.*
   - **b)** *Clostridium tetani & B.anthracis.*
   - **c)** *Corynbacterium diptheriae & Streptococcus pyogenes.*
   - **d)** *Staph. aureus & Streptococcus pyogenes.*

الممسوحة ضوئيا بـ CamScanner

اسم الطالب :

Q2) Put True and False beside each statement & re-correct each False statements (I0 marks):

1) Botulinum toxin a neurotoxin causing uncontrollable muscle spasms (lockjaw) and convulsions. ( ).

2) Bacterial endotoxin is produced by Gram Positive bacteria during lysis or multiplication of bacteria and considered a weakly antigenic ( ).

3) During bacterial growth curve, bacteria are more sensitive to antibiotics in stationary phase ( ).

4) Gram positive bacteria are the second Colonizers in formation of dental plaque and caries ( ).

5) Cadherin is a glycoprotein allowing microbes to enter host cells. ( ).

Civilization University
Faculty of Medicine & Health Sciences
Section: Dental Medicine
1st Semester 2019/2020

جامعة الحضارة
كلية الطب و العلوم الطبية
شعبة طب الاسنان
الفصل الدراسي الا ول 2019/2020

اسم الطالب :

Q3) Choice and write briefly essay on only ONE (1) of the following: (I0 marks):

1) **Role of Normal mouth Microbiota in dental plaque and caries.**
2) **Bacterial Cells can damage Host Cells by three mechanisms.**
   a) Enumerate these three mechanisms?
   b) In your think, which is the most bacterial damage mechanism? Why?

الممسوحة ضوئيا بـ CamScanner

MICRO
د/ الفوري
اللميسي

15) **The cell wall of bacteria:**

a) Determinate the staining properties according to Gram and contains antigens, which can be used in the diagnostics.
b) Is the surface component of all bacteria.
c) Contains peptidoglycan always resistant to lysozyme.
d) In G+ bacteria contains lipopolysaccharide.

16) **Which of the following components is present in gram-negative bacteria but not in gram positive bacteria:**

a) Peptidoglycan
b) Lipid A
c) Capsule
d) Flagella

17) **The form of genetic exchange in which donor DNA is introduced to the recipient by a bacterial virus is called:**

a) Transformation
b) Conjugation
c) Transfection
d) Transduction

18) **Antimicrobial resistance has become a significant problem. Which one of the following is of major concern worldwide:**

a) Penicillin resistance in *Streptococcus pneumoniae.*
b) Methicillin resistance in *Staphylococcus aureus*
a) Penicillin resistance in *Neisseria gonorrhoeae*
b) Vancomycin resistance in *Staphylococcus aureus.*

19) **Most genes of bacterial Exotoxins are carried on:**

a) Plasmids
b) Pilline or fimbria.
c) Ribosomes and mesosomes.
d) All of the above.

20) **Human Normal Flora or microbiota are regularly found at any anatomical site of human body EXCEPT:**

a) Human Oral Cavity and Respiratory system.
b) Large and small intestine.
c) Cerebrospinal fluid, blood and brain.
d) Genitourinary tract.

الممسوحة ضوئيا بـ CamScanner

Republic of Yemen

الجمهورية اليمنية
الجامعة الإماراتية الدولية
كلية الطب والعلوم الصحية
الفصل الاول ٢٠١٩-٢٠٢٠

MICROBIOLOGY
د/ الغوري
اللميسي

اسم الطالب:

MEDICAL MICROBIOLOGY

Midte . Examination (3rd level /Medicine) **Allowed time: 2 hrs**

e correct answer for each the following questions (60 marks):

1) **Antimicrobial resistance has become a significant problem. Which one of the following is of major concern worldwide:**
   - **a)** Penicillin resistance in *Streptococcus pneumoniae*.
   - **b)** Nafcillin resistance in *Staphylococcus aureus*
   - **a)** Penicillin resistance in *Neisseria gonorrhoeae*
   - **b)** Vancomycin resistance in *Staphylococcus aureus*.

2) **The least method for acquire bacterial antibiotic gene resistance:**
   - **a)** Transformation.
   - **b)** Conjugation.
   - **c)** Transposons.
   - **d)** Transduction.

3) **The Causative bacterial agent of Scarlet fever and acute glomerulonephritis is:**
   - **a)** *Staphylococcus aureus.*
   - **b)** *Streptococcus group-A.*
   - **c)** *Streptococcus group-B.*
   - **d)** *Streptococcus group-C.*

4) **Bacterial Food poisoning can be caused by:**
   - **a)** *Staphylococcus aureus, Bacillus cereus.*
   - **b)** *Clostridium perfringens.*
   - **c)** *Clostridium botulinum.*
   - **d)** All of the above.

5) **Responsible for causing more than 80% of all community-acquired UTIs:**
   - **a)** *Escherichia coli.*
   - **b)** *Proteus vulgaris.*
   - **c)** *Staph. saprophyticus.*
   - **d)** *Yersinia pestis.*

6) **The most common cause of typhoid fever is the following bacteria:**
   - **a)** *B. melitensis.*
   - **b)** *Salmonella. typhi.*
   - **c)** *Shigella sonnei.*
   - **d)** *Strept.viridans.*

7) **Associated with gastritis, duodenal (peptic) ulcer disease, gastric ulcers, and gastric carcinoma:**
   - **a)** *Salmonella typhi.*
   - **b)** *Helicobacter pylori.*
   - **c)** *Brucella abortus.*
   - **d)** *Shigella sonnei.*

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Microbiology
د/ الغوري
اللميسي

8) **The most common cause bacillary dysentery in developed countries is:**
   - **a)** *S. dysenteriae* (Group A)
   - **b)** *S. flexneri* (Group B)
   - **c)** *S. boydii* (Group C)
   - **d)** *S. sonnei* (Group D)

9) **The following bacterial infection is similar to cholera infection:**
   - **a)** *Enterotoxigenic (ETEC).*
   - **b)** *Enteropathogenic (EPEC).*
   - **c)** *Enteroinvasive (EIEC).*
   - **d)** *Enterohemorrhagic (EHEC serotype 0157:H7).*

10) **More severe Brucellosis in Yemen can be caused by the following bacteria:**
   - **a)** *B. suis & B. canis.*
   - **b)** *B. melitensis.*
   - **c)** *Salmonella typhi & paratphi.*
   - **d)** *B. abortus.*

11) **Cell wall of both Gram-positive and Gram-negative bacteria are composed of complex macromolecules. Which of the following statement describes both types of cell walls:**
   - **a)** They contain significant amounts of teichoic acid.
   - **b)** They contain murein in their cell wall.
   - **c)** The polysaccharide O- antigen determines their antigenic specificity.
   - **d)** They contain murein in their cell membrane.

12) **The majority of human clinical anthrax is:**
   - **a)** Cutaneous anthrax.
   - **b)** Gastrointestinal anthrax.
   - **c)** Pulmonary anthrax.
   - **d)** All of the above.

13) **Pulmonary T.B. in Yemen is more prevalent in:**
   - **a)** Sana'a governorate.
   - **b)** Aden governorate.
   - **c)** Taiz governorate.
   - **d)** Hodeida governorate.

14) **Factors that assist microbial pathogens to established infection are:**
   - **a)** Capsule secretion and possession Pilli.
   - **b)** Production of endotoxin or exotoxin.
   - **c)** Production of extra-cellular enzymes.
   - **d)** All the above.

15) **A carrier of human *Salmonella. typhi* had:**
   - **a)** Anti-O Ab. Positive test
   - **b)** Anti-H Ab. Positive test.
   - **c)** Anti-Vi Ab or Anti-K Ab. Positive test.
   - **d)** All of the above.

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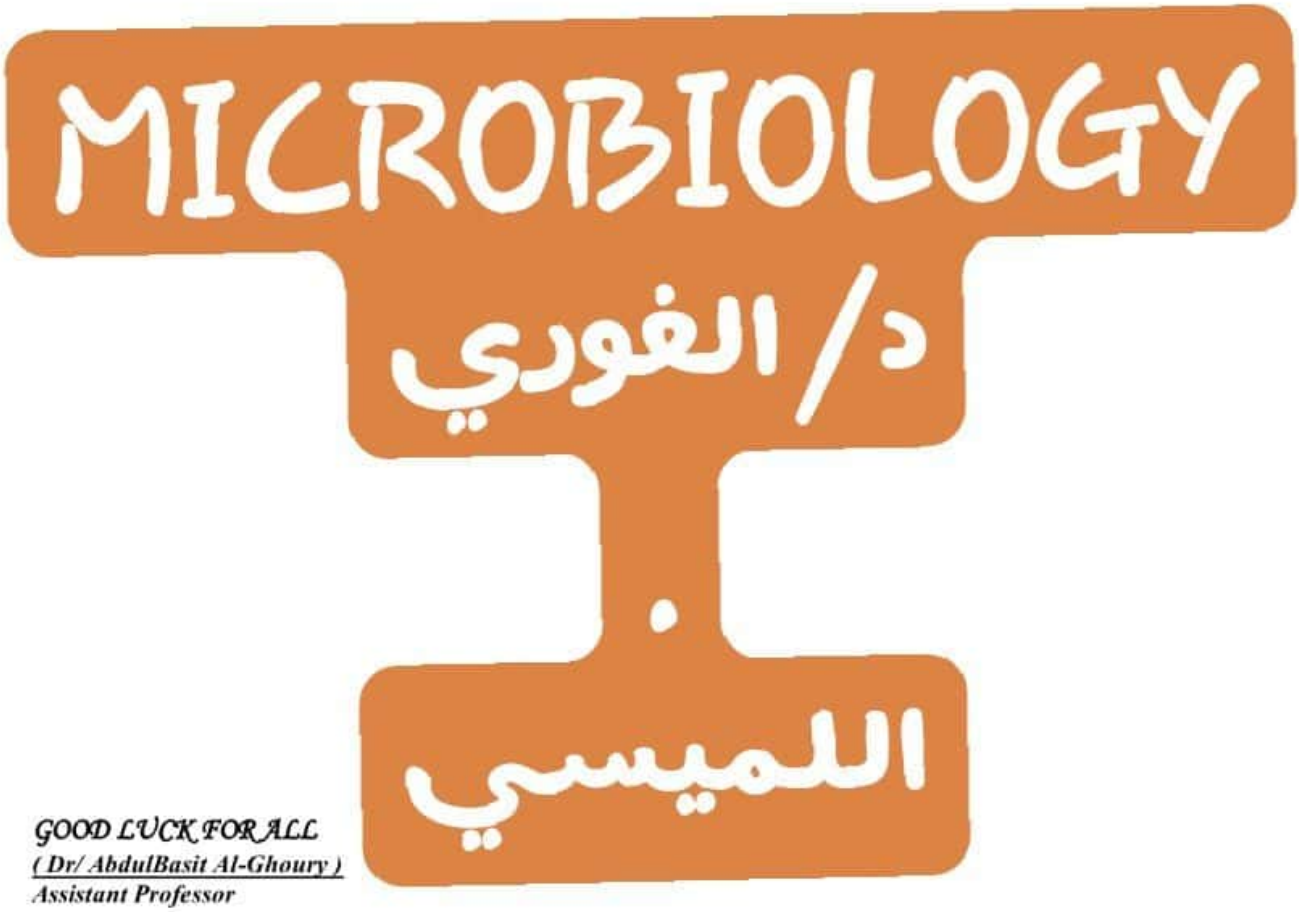
اسم الطالب:

Q2) Answer the following question (20 marks):

A 54-year-old male patient attended Medicine OPD, with a history of fever, headache, low back pain, joint pain for 1 month. History revealed that he was a shepherd by profession and was in habit of consuming unboiled milk. The patient was admitted and investigated thoroughly. WBC count was raised. ESR (erythrocyte sedimentation rate) was raised; Widal test was negative and Rose Bengal test positive. The serum was negative for HIV antibodies by ELISA. Peripheral blood smear for malaria parasite was negative.

1) **What is the correct diagnose for this condition.**
2) **What are the pathogenic bacterial causing this infection?**
3) **What are the modes of infection to humans?**
4) **What are the risk factors for this infection?**



GOOD LUCK FOR ALL
(Dr/ AbdulBasit Al-Ghoury)
Assistant Professor

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MICROBIOLOGY
د/ الفوري
اللميسي

اسم الطالب:

16) The action of one anti-microbia… the activity of another is called:

a) Antagonism. **b)** Synergism. **c)** Resistance. **d)** Mutualism.

17) Antisepsis & Antiseptic agents are:

a) Chemical agents used on skin or non-living tissues.
b) Chemical agents used on non- living tissues.
c) Chemical agents used as a topic and systemic disinfectant.
d) None of the above.

18) Chest radiograph of a patient showing a widened mediastinum that is characteristic of:

a) Pulmonary anthrax.
b) T.B. infection.
c) Labor pneumonia.
d) Botulism.

19) Lockjaw / Stiffness of jaw is caused by:

a) *Clostridium tetani.*
b) *Clostridium botulinum.*
c) *B.anthracis.*
d) *Clostridium perfringens.*

20) Selective Toxicity of anti-microbial drugs is:

a) Cause greater harm to microorganisms and to host.
b) Activity of one drug interferes with the action of another.
c) The range of microorganisms they kill or inhibit.
d) None the above.

21) Features of diphtheria toxicosis:

a) Edema of the neck hypodermic tissues.
b) Cyanosis of lips and paleness of skin.
c) Tachycardia and decreasing of a body temperature.
d) All of the above.

22) Miliary tuberculosis is more prevalent among :

a) Children below 2 years.
b) Children 2 – Io years.
c) Children above Io years.
d) Adult's male and female.

23) lumpy jaw is caused by :

a) *Actinomyces.*
b) *Nocardia.*
c) *Clostridium tetani.*
d) *Staphylococcus.*

الممسوحة ضوئيا بـ CamScanner

Microbiology
د/ اللميسي
اللميسي

اسم الطالب:

24) Antistreptolysin-O (ASOT) :

a) Suggests recent upper respiratory tract bacterial infection.
b) Induced by Skin bacterial infection.
c) Recent bacterial upper respiratory tract infection by S.pyogens.
d) Antistreptolysin-S antibody titer was positive.

25) *E.coli* virulence factor that assist urinary colonization and infection (UTI) is :

a) Pilli and pillin proteins.
b) Lipopolysaccharides LPS.
c) Toxins and capsule.
d) All of the above.

26) Low-level disinfectants are used for:

a) Non-critical instruments and devices.
b) Endoscopes, Surgical instruments.
c) Animate objectives.
d) All of the above.

27) A 10-year-old child has a primary pulmonary Mycobacterium tuberculosis infection. Which of the following features of tuberculosis is most correct?

a) In primary tuberculosis, an active exudative lesion develops and rapidly spreads to lymphatic and regional lymph nodes.
b) The exudative lesion of primary tuberculosis often heals slowly.
c) If tuberculosis develops years later, it is a result of another exposure to Mycobacterium tuberculosis.
d) In primary tuberculosis, all of the infecting Mycobacterium tuberculosis organisms are killed by the patient's immune response.

28) Bactericidal antibiotic is:

a) Kill bacteria and reversibly inhibit growth of microorganisms.
b) Suitable when host defenses are potentially effective.
c) Suitable when host defenses are adequate.
d) None of the above.

29) Urease test is used for diagnosis:

a) Scarlet fever.
b) *Salmonella typhi* infection.
c) Undulant fever.
d) *H pylori* infection.

30) Human Normal Flora or microbiota are regularly found at any anatomical site of human body EXCEPT:

a) Human Oral Cavity and Respiratory system.
b) Large and small intestine.
c) Cerebrospinal fluid, blood and brain.
d) Genitourinary tract.

الممسوحة ضوئيا بـ CamScanner

MICRO
د/ الغوري
اللميسي

d) All the above.

6) The bacteria which are able to grow at 20°C to 40°C, are known as:

a) Psychrophilic. b) Thermophilic.

c) Mesophilic. d) All the above.

7) The following bacteria have no or without cell wall :

a) Mycoplasma b) G.positive bacteria c) G.negative bacteria.

8) Bacterial Endospores (Spores) is most common in:

a) Gram-positive rod bacteria b) Gram-negative rod bacteria.

C) Gram-positive cocci bacteria. d) All the above

9) The difference between Gram-negative and Gram-positive bacteria is:

a) They have peptidoglycan layer.

b) They have both LPS & Tiechic acid.

c) Plasma membrane in Gram positive bacteria.

d) Periplasmic space between inner and outer membrane

10) Transposons are characterized by:

a) Transfer of drug resistance,

b) Transfer from chromosome to a plasmid and vice versa.

c) Transfer from one chromosome site to another.

d) All of the above

11) The most common method for Quantification of Bacteria:

b) Plate Count Method. b) Direct Cell Count Method.

c) Membrane Filter Method. d) Turbidity Method.

12) Advantages of the oral normal flora are:

a) Contribute to immunity.

b) Exert microbial antagonism against nonindigenous species.

c) Inducing low levels of circulating and secretory antibodies.

d) All of the above.

13) The mode of gene transfer in which naked DNA is taken up is called:

a) Transformation b) Transduction c) Conjugation

14) Responsible for Biosynthesis functions and regarded as Semi-permeable:

a) Bacterial cell wall b) Bacterial cell membrane

c) Bacterial flagellum d) Bacterial peptidoglycan.

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Civilization University
Faculty of Medicine & Health Sciences
Section: Dental Medicine
1st Semester 2019/2020

MICROBIOLOGY
د/ الغوري
اللميسي

جامعة الحضارة
كلية الطب و العلوم الطبية
شعبة طب الاسنان
الفصل الدراسي الا ول 2019/2020

اسم الطالب :

MICROBIOLOG[illegible]NOLOGY-1

Midterm Examination (3rd level /Dentistry) **Allowed time: 2 hrs**

Q-1) Choice the correct answer for each the following questions {20 marks}:

1) The least method for acquire bacterial antibiotic gene resistance is:

a) Transformation. **b)** Conjugation.

c) Transposons. **d)** Transduction.

2) Cell wall of both Gram-positive and Gram-negative bacteria are composed of complex macromolecules. Which of the following statement describes both types of cell walls:

a) They contain significant amounts of teichoic acid.

b) They contain murein in their cell wall.

c) The polysaccharide O- antigen determines their antigenic specificity.

d) They contain murein in their cell membrane.

3) The most important bacterial virulence factor in the formation of dental caries is:

a) Production of bacterial hemolysins.

b) The formation of lactic acid by gram-positive bacteria.

c) The formation of lactic acid by gram-negative bacteria.

d) The formation of capsule or glycocalyx.

4) The bacterial species that predominantly adheres and forms a biofilm on the salivary pellicle and regarded as a primary pathogen in enamel caries is:

a) *S. pneumoniae*

b) *S. agalactiae*

c) *S. mutans*

d) *S. oralis.*

5) The virulence factors that assist microbial pathogens to established infection is:

a) Capsule secretion and possession Pilli.

b) Production of endotoxin or exotoxin.

c) Production of extra-cellular enzymes.

الممسوحة ضوئيا بـ CamScanner

1:17 Microbiology د/ الفوري اللميسي

MICROBIOLOG[illegible]OGY-1

Midterm Examination (3rd level /Dentistry) **Allowed time: 2 hrs**

Q-1) Choice the correct answer for each the following questions {20 marks}:

1) The least method for acquire bacterial antibiotic gene resistance is:

a) Transformation. **b)** Conjugation.

c) Transposons. **d)** Transduction.

2) Cell wall of both Gram-positive and Gram-negative bacteria are composed of complex macromolecules. Which of the following statement describes both types of cell walls:

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جامعة الحضارة
كلية الطب و العلوم الطبية
شعبة طب الاسنان
الفصل الدراسي الا ول 2019/2020

اسم الطالب :

d) All the above.

6) The bacteria which are able to grow at 20°C to 40°C, are known as:

a) Psychrophilic. **b)** Thermophilic.

c) Mesophilic. **d)** All the above.

7) The following bacteria have no or without cell wall :

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1) Pathogenic bacteria can acquire antibiotic gene resistance by:
   a) Transformation. b) Conjugation.
   c) Transposons. d) All the above.

2) The Cell wall of both Gram-positive and Gram-negative bacteria are composed of complex macromolecules. Which of the following statement describes both types of cell walls:
   a) They contain significant amounts of Teichoic acid.
   b) They contain pores made from proteins.
   c) They contain significant amounts of lipopolysaccharides (LPS).
   d) They contain murine.

3) The most bacterial pathogens can grow at 37°C and regarded as:
   a) Psychrophilic. b) Thermophilic.
   c) Mesophilic. d) All the above.

4) The mode of gene transfer in which naked DNA is taken up is called:
   a) Transformation b) Transduction c) Conjugation

5) The following bacteria have no or without cell wall :
   a) Mycoplasma b) G.positive bacteria c) G.negative bacteria.

6) Single base substitution in the 3rd base nucleotide position of a codon can cause:
   a) Silent mutation b) Missense mutation c) Non sense mutation

7) Bacterial Endospores (Spores) is most common in:
   a) Gram positive bacteria b) Gram negative bacteria.
   C)All the above. d) Non the above.

8) Addition or deletion of one or more bases in the DNA is called:
   a) Frame shift mutation b) Point mutation c) Silent mutation

9)The difference between Gram-negative and Gram-positive bacteria is:
   a) They have peptidoglycan layer.
   b) They have both LPS & Tiechic acid.
   c) Plasma membrane in Gram positive bacteria.
   d) Periplasmic space between inner and outer membrane.

10) Transposons are characterized by:
   a) Transfer of drug resistance,
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10) **Transposons are characterized by:**
a) Transfer of drug resistance,
b) Transfer from chromosome to a plasmid and vice versa.
c) Transfer from one chromosome site to another.
d) All of the above

11) **Environmental factors affecting growth of bacteria:**
a) Nutrients and Temperature.
b) PH and Oxygen Requirements.
c) Osmotic pressure.
d) All the above.

12) **The most common method for Quantification of Bacteria:**
a) Plate Count Method. b) Direct Cell Count Method.
c) Membrane Filter Method. d) Turbidity Method.

13) **Responsible for Biosynthesis functions and regarded as Semi-permeable:**
a) Bacterial cell wall b) Bacterial cell membrane
c) Bacterial flagellum d) Bacterial peptidoglycan.

14) **The cell wall of bacteria:**
a) Determinate the staining properties according to Gram and contains antigens, which can be used in the diagnostics.
b) Is the surface component of all bacteria.
c) Contains peptidoglycan always resistant to lysozyme.
d) In G+ bacteria contains lipopolysaccharide.

15) **Which of the following components is present in gram-negative bacteria but not in gram positive bacteria?**
a) Peptidoglycan
b) Lipid A
c) Capsule
d) Flagella

16) **The form of genetic exchange in which donor DNA is introduced to the recipient by a bacterial virus is:**
a) Transformation
b) Conjugation
c) Transfection
d) Transduction.

17) **Most microorganisms pathogenic for humans grow best in the laboratory when cultures are incubated at**
a) 15–20 °C
b) 20–30 °C
c) 30–37 °C

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a) Peptidoglycan
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16) The form of genetic exchange in which donor DNA is introduced to the recipient by a bacterial virus is:

a) Transformation
b) Conjugation
c) Transfection
d) Transduction.

17) Most microorganisms pathogenic for humans grow best in the laboratory when cultures are incubated at

a) 15–20 °C
b) 20–30 °C
c) 30–37 °C
d) 38–50 °C.

18) Selective bacteria culture media are characterized by:

a) Have a substance that inhibits the growth of some bacteria while allowing the growth of others.
b) Have a chemical compound that reacts differently to different organisms and produce morphologically distinguishable colonies.
c) Contain the essential requirements for the growth of most bacteria.
d) All the above.

19) The growth rate of bacteria during the maximum stationary phase of growth is:

a) Zero. b) Increasing. C)Constant. d)Decreasing.

20) Bacterial Culture media include some of the following requirements for growth, which are:

a) Water and energy sources.
b) Nitrogen-containing compounds and PH indicators.
c) Accessory growth factors and Solidifying agents.
d) Selective and reducing agents.
e) All the above.

A	B
1) Neisseria spp	a) Filamentous branching bacteria.

الممسوحة ضوئيا بـ CamScanner

a) Zero. b) Increasing. c)Constant. d)Decreasing.

20) **Bacterial Culture media include some of the following requirements for growth, which are:**
   a) Water and energy sources.
   b) Nitrogen-containing compounds and PH indicators.
   c) Accessory growth factors and Solidifying agents.
   d) Selective and reducing agents.
   e) All the above.

A	B
1) *Neisseria spp* 2) Bacterial Growth 3) A microbial biofilm. 4) Bacterial Plasmid 5) Actinomyces.	a) Filamentous branching bacteria. b) Extra-chromosomal DNA. *c) Aggregations of microbes.* d) Gram Positive bacteria. e) An increase in all the cell components. f) Capnophilic microorganism that requires high CO2 levels to grow.

إنهاء

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